RAW SEQUENCE LISTING   DATE: 02/11/2002
PATENT APPLICATION: **US/10/044,716**   TIME: 10:05:07

Input Set : **A:\270-070US.ST25.txt**
Output Set: **N:\CRF3\02112002\J044716.raw**

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    3 <110> APPLICANT: LANGENFELD, John
    5 <120> TITLE OF INVENTION: BONE MORPHOGENETIC PROTEIN-2 IN THE TREATMENT AND DIAGNOSIS
OF CANCER
    7 <130> FILE REFERENCE: 270/070US
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/044,716
   10 <141> CURRENT FILING DATE: 2002-01-11
   12 <150> PRIOR APPLICATION NUMBER: US60/261,252
   13 <151> PRIOR FILING DATE: 2001-01-12
   15 <160> NUMBER OF SEQ ID NOS: 16
   17 <170> SOFTWARE: PatentIn version 3.1
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   27 <223> OTHER INFORMATION: Homo sapiens: Taxon:9606
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Input Set : A:\270-070US.ST25.txt
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 75 <223> OTHER INFORMATION: TGFB; Region: Transforming growth factor-beta (TGF-beta)
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 83 tgcccgacac tgagacgctg ttcccagcgt gaaaagagag actgcgcggc cggcacccgg     180
 85 gagaaggagg aggcaaagaa aaggaacgga cattcggtcc ttgcgccagg tcctttgacc     240
 87 agagtttttc catgtggacg ctctttcaat ggacgtgtcc ccgcgtgctt cttagacgga     300
 89 ctgcggtctc ctaaaggtcg acc atg gtg gcc ggg acc cgc tgt ctt cta gcg     353
 90                         Met Val Ala Gly Thr Arg Cys Leu Leu Ala
 91                          1               5                   10
 93 ttg ctg ctt ccc cag gtc ctc ctg ggc ggc gcg gct ggc ctc gtt ccg     401
 94 Leu Leu Leu Pro Gln Val Leu Leu Gly Gly Ala Ala Gly Leu Val Pro
 95                 15                  20                  25
 97 gag ctg ggc cgc agg aag ttc gcg gcg gcg tcg tcg ggc cgc ccc tca     449
 98 Glu Leu Gly Arg Arg Lys Phe Ala Ala Ala Ser Ser Gly Arg Pro Ser
 99             30                  35                  40
101 tcc cag ccc tct gac gag gtc ctg agc gag ttc gag ttg cgg ctg ctc     497
102 Ser Gln Pro Ser Asp Glu Val Leu Ser Glu Phe Glu Leu Arg Leu Leu
103          45                  50                  55
105 agc atg ttc ggc ctg aaa cag aga ccc acc ccc agc agg gac gcc gtg     545
106 Ser Met Phe Gly Leu Lys Gln Arg Pro Thr Pro Ser Arg Asp Ala Val
107      60                  65                  70
109 gtg ccc ccc tac atg cta gac ctg tat cgc agg cac tca ggt cag ccg     593
110 Val Pro Pro Tyr Met Leu Asp Leu Tyr Arg Arg His Ser Gly Gln Pro
111 75                  80                  85                  90
113 ggc tca ccc gcc cca gac cac cgg ttg gag agg gca gcc agc cga gcc     641
114 Gly Ser Pro Ala Pro Asp His Arg Leu Glu Arg Ala Ala Ser Arg Ala
115              95                 100                 105
117 aac act gtg cgc agc ttc cac cat gaa gaa tct ttg gaa gaa cta cca     689
118 Asn Thr Val Arg Ser Phe His His Glu Glu Ser Leu Glu Glu Leu Pro
119             110                 115                 120
121 gaa acg agt ggg aaa aca acc cgg aga ttc ttc ttt aat tta agt tct     737
122 Glu Thr Ser Gly Lys Thr Thr Arg Arg Phe Phe Phe Asn Leu Ser Ser
123         125                 130                 135
125 atc ccc acg gag gag ttt atc acc tca gca gag ctt cag gtt ttc cga     785
126 Ile Pro Thr Glu Glu Phe Ile Thr Ser Ala Glu Leu Gln Val Phe Arg
127      140                 145                 150
129 gaa cag atg caa gat gct tta gga aac aat agc agt ttc cat cac cga     833
130 Glu Gln Met Gln Asp Ala Leu Gly Asn Asn Ser Ser Phe His His Arg
131 155                 160                 165                 170
133 att aat att tat gaa atc ata aaa cct gca aca gcc aac tcg aaa ttc     881
134 Ile Asn Ile Tyr Glu Ile Ile Lys Pro Ala Thr Ala Asn Ser Lys Phe
135                 175                 180                 185
137 ccc gtg acc aga ctt ttg gac acc agg ttg gtg aat cag aat gca agc     929
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141 agg tgg gaa agt ttt gat gtc acc ccc gct gtg atg cgg tgg act gca    977
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143         205             210             215
145 cag gga cac gcc aac cat gga ttc gtg gtg gaa gtg gcc cac ttg gag   1025
146 Gln Gly His Ala Asn His Gly Phe Val Val Glu Val Ala His Leu Glu
147     220             225             230
149 gag aaa caa ggt gtc tcc aag aga cat gtt agg ata agc agg tct ttg   1073
150 Glu Lys Gln Gly Val Ser Lys Arg His Val Arg Ile Ser Arg Ser Leu
151 235             240             245             250
153 cac caa gat gaa cac agc tgg tca cag ata agg cca ttg cta gta act   1121
154 His Gln Asp Glu His Ser Trp Ser Gln Ile Arg Pro Leu Leu Val Thr
155             255             260             265
157 ttt ggc cat gat gga aaa ggg cat cct ctc cac aaa aga gaa aaa cgt   1169
158 Phe Gly His Asp Gly Lys Gly His Pro Leu His Lys Arg Glu Lys Arg
159         270             275             280
161 caa gcc aaa cac aaa cag cgg aaa cgc ctt aag tcc agc tgt aag aga   1217
162 Gln Ala Lys His Lys Gln Arg Lys Arg Leu Lys Ser Ser Cys Lys Arg
163     285             290             295
165 cac cct ttg tac gtg gac ttc agt gac gtg ggg tgg aat gac tgg att   1265
166 His Pro Leu Tyr Val Asp Phe Ser Asp Val Gly Trp Asn Asp Trp Ile
167     300             305             310
169 gtg gct ccc ccg ggg tat cac gcc ttt tac tgc cac gga gaa tgc cct   1313
170 Val Ala Pro Pro Gly Tyr His Ala Phe Tyr Cys His Gly Glu Cys Pro
171 315             320             325             330
173 ttt cct ctg gct gat cat ctg aac tcc act aat cat gcc att gtt cag   1361
174 Phe Pro Leu Ala Asp His Leu Asn Ser Thr Asn His Ala Ile Val Gln
175             335             340             345
177 acg ttg gtc aac tct gtt aac tct aag att cct aag gca tgc tgt gtc   1409
178 Thr Leu Val Asn Ser Val Asn Ser Lys Ile Pro Lys Ala Cys Cys Val
179         350             355             360
181 ccg aca gaa ctc agt gct atc tcg atg ctg tac ctt gac gag aat gaa   1457
182 Pro Thr Glu Leu Ser Ala Ile Ser Met Leu Tyr Leu Asp Glu Asn Glu
183         365             370             375
185 aag gtt gta tta aag aac tat cag gac atg gtt gtg gag ggt tgt ggg   1505
186 Lys Val Val Leu Lys Asn Tyr Gln Asp Met Val Val Glu Gly Cys Gly
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202 <223> OTHER INFORMATION: Region: TGF-beta propeptide
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212 <223> OTHER INFORMATION: TGFB; Region: Transforming growth factor-beta (TGF-beta)
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221             20                  25                  30
224 Phe Ala Ala Ala Ser Ser Gly Arg Pro Ser Ser Gln Pro Ser Asp Glu
225         35                  40                  45
228 Val Leu Ser Glu Phe Glu Leu Arg Leu Leu Ser Met Phe Gly Leu Lys
229     50                  55                  60
232 Gln Arg Pro Thr Pro Ser Arg Asp Ala Val Val Pro Pro Tyr Met Leu
233 65                  70                  75                  80
236 Asp Leu Tyr Arg Arg His Ser Gly Gln Pro Gly Ser Pro Ala Pro Asp
237             85                  90                  95
240 His Arg Leu Glu Arg Ala Ala Ser Arg Ala Asn Thr Val Arg Ser Phe
241             100                 105                 110
244 His His Glu Glu Ser Leu Glu Glu Leu Pro Glu Thr Ser Gly Lys Thr
245         115                 120                 125
248 Thr Arg Arg Phe Phe Phe Asn Leu Ser Ser Ile Pro Thr Glu Glu Phe
249     130                 135                 140
252 Ile Thr Ser Ala Glu Leu Gln Val Phe Arg Glu Gln Met Gln Asp Ala
253 145                 150                 155                 160
256 Leu Gly Asn Asn Ser Ser Phe His His Arg Ile Asn Ile Tyr Glu Ile
257             165                 170                 175
260 Ile Lys Pro Ala Thr Ala Asn Ser Lys Phe Pro Val Thr Arg Leu Leu
261         180                 185                 190
264 Asp Thr Arg Leu Val Asn Gln Asn Ala Ser Arg Trp Glu Ser Phe Asp
265     195                 200                 205
268 Val Thr Pro Ala Val Met Arg Trp Thr Ala Gln Gly His Ala Asn His
269     210                 215                 220
272 Gly Phe Val Val Glu Val Ala His Leu Glu Glu Lys Gln Gly Val Ser
273 225                 230                 235                 240
276 Lys Arg His Val Arg Ile Ser Arg Ser Leu His Gln Asp Glu His Ser
277             245                 250                 255
280 Trp Ser Gln Ile Arg Pro Leu Leu Val Thr Phe Gly His Asp Gly Lys
281         260                 265                 270
284 Gly His Pro Leu His Lys Arg Glu Lys Arg Gln Ala Lys His Lys Gln
285         275                 280                 285
288 Arg Lys Arg Leu Lys Ser Ser Cys Lys Arg His Pro Leu Tyr Val Asp
289     290                 295                 300
292 Phe Ser Asp Val Gly Trp Asn Asp Trp Ile Val Ala Pro Pro Gly Tyr
293 305                 310                 315                 320
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301             340             345             350
304 Asn Ser Lys Ile Pro Lys Ala Cys Cys Val Pro Thr Glu Leu Ser Ala
305             355             360             365
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330 <223> OTHER INFORMATION: NOG
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336 <223> OTHER INFORMATION:
339 <220> FEATURE:
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341 <222> LOCATION: (1)..(699)
342 <223> OTHER INFORMATION: Noggin, mouse, homolog of
345 <300> PUBLICATION INFORMATION:
346 <301> AUTHORs: Valenzuela,D.M., Economides,A.N., Rojas,E., Lamb,T.M., Nunez,L.,
Jones,P., Ip,N.Y., Espinosa,R., Brannan,C.I., Gilbert,D.J., Copeland,N.G., Jenkins,N.A.,
LeBeau,M.M., Harland,R.M. and Yancopoul
347 <302> TITLE: Identification of mammalian noggin and its expression in the adult
nervous system
348 <303> JOURNAL: J. Neurosci.
349 <304> VOLUME: 15
350 <305> ISSUE: 9
351 <306> PAGES: 6077-6084
352 <307> DATE: 1995
353 <308> DATABASE ACCESSION NO: NM_005450
354 <309> DATABASE ENTRY DATE: 2000-11-01
355 <313> RELEVANT RESIDUES: (1)..(699)
357 <300> PUBLICATION INFORMATION:
358 <301> AUTHORs: McMahon,J.A., Takada,S., Zimmerman,L.B., Fan,C.M., Harland,R.M. and
McMahon, A.P.
359 <302> TITLE: Noggin-mediated antagonism of BMP signaling is required for growth and
patterning of the neural tube and somite
360 <303> JOURNAL: Genes Dev.
361 <304> VOLUME: 12
362 <305> ISSUE: 10
363 <306> PAGES: 1438-1452
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364 <307> DATE: 1998

2/11/02

VERIFICATION SUMMARY   DATE: 02/11/2002
PATENT APPLICATION: US/10/044,716   TIME: 10:05:08

Input Set : **A:\270-070US.ST25.txt**
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L:9 M:270 C: Current Application Number differs, Replaced Current Application Number